Fall 9-1-2000

PHYS 322.01: Optics I

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Physics 322 - Optics I
Fall Semester 2000

LECTURES:	Tu, Th 11:10am - 12:00pm SC (Science Complex) Bldg. Rm 231
INSTRUCTOR:	Andrew Ware Office: SC Bldg. Rm 120, (Tel. No. 243-6221) Office Hours: To be announced.
WEBSITE:	http://www.physics.umt.edu/phys322/
TEXTBOOK:	Optics by E. Hect, 3rd Ed. (Addison-Wesley, 1998)
PREREQUISITE:	Phys 222N and corequisite Math 251
HOMEWORK:	Problem assignments (about 1 assignment per week) These will be collected and graded.
LABS:	There will be approximately 3 labs during the semester. You will work in groups of two or three but each person will turn in their own lab report.
EXAMS:	Two 50-minute exams Around Th 10/5 and Tu 11/21 One 2-hour final exam (10:10am-12:10pm, MO 12/18) * Comprehensive but weighted towards the material presented after the last in class exam.

GRADING:		
	50-minute exams	30 % (15 % each)
	Homework	20 %
	Labs	25 %
	Final exam	25 %

[This course can be taken for a traditional letter grade (A,B,C,D,F) only]

Physics 322 - Course Outline

Week	Dates	Topics	Chapters	Exams
1	9/5, 9/7	**Introduction**	1	
2	9/12, 9/14	**Reflection, refraction, Fermat's law**	4	
3	9/19, 9/21	**Familiar aspects of light**	4	
4	9/26, 9/28	**Geometrical optics**	5	
5	10/3, 10/5	**Fiber optics, optical devices**	5	No. 1 (10/5)
6	10/10, 10/12	**Thick lenses**	6	
7	10/17, 10/19	**Matrix method, aberrations**	6	
8	10/24, 10/26	**Wave basics**	2	
9	10/31, 11/2	**More on waves**	2	
10	11/7	**Photons and light**	3	
11	11/14, 11/16	**EM theory**	3	
12	11/21, 11/23	**Propagation of electromagnetic waves**	4	No. 2 (11/21)
13	11/28	**Optical properties of metals**	4	
14	12/5, 12/7	**Superposition principle**	7	
15	12/12, 12/14	**More on superposition**	7	
16	12/18	**Final Exam** Monday, 10:10am-12:10pm		

Mo 10/16 - Last day to add, drop or change sections.